

REMARKS

Claims 1-9, 24-28 and 38-43 are pending and under consideration. By means of the present amendment, claims 1-9 and 24-28 have been amended and new claims 38-43 have been added. Entry of the amendment is respectfully requested. Claims 10-23 and 29-37 were withdrawn previously.

Rejections under 35 U.S.C. § 102 (e)

In the Final Office Action of November 14, 2005, claims 1-6, 9 and 24-28 were rejected under 35 USC § 102(e) as being anticipated by Hatano et al., US Pat. No. 6,756,614 (" '614 "). Claims 1-6, 9 and 24-28 as presently amended are directed to processes comprising a step of forming a first crystalline material comprising crystal grains preferentially grown in the {100} orientation with respect to the vertical direction of the substrate by uniformly heat-treating a starting material, as disclosed by the present application (See, for example, par. [0116] of the publication of the present application, US Publ. Pat. Appl. No. 2004/0209447).

Also, the above claims as presently amended are directed to methods comprising a step of forming a second crystalline material by heat-treating said first crystalline material by a plurality of times so as to selectively form, on said first crystalline material, a temperature distribution having a high temperature region and a low temperature region (See, for example, pars. [0118] to [0126]).

Applicants respectfully submit that '614 does not anticipate Applicants' invention as set forth in the claims as presently amended because '614 fails to teach every element and limitation of the claims at issue. In particular, '614 fails to disclose the steps for forming the first crystalline material and the second crystalline material as set forth above. Accordingly, because '614 fails to suggest each and every element and limitation of amended independent claims 1 and 24, '614 does not anticipate the invention as claimed.

Rejections under 35 U.S.C. § 103(a)

Claims 7 and 8 were rejected under 35 U.S.C. 103(a) as being unpatentable over '614. Applicants submit that the cited reference neither discloses nor fairly suggests the above steps for forming the first crystalline material and the second crystalline material.

In particular, the claimed process, as stated above, comprises a second step of forming a first crystalline material comprising crystal grains preferentially grown in the {100} orientation with respect to the vertical direction of the substrate (See par. [0116]; Figs. 3A-3C). By contrast, the methods taught by '614 specifically yield a "semiconductor layer [that] is composed of a polycrystalline silicon film in which at least the main orientation of the channel region is {110} with respect to the surface of the gate insulating film" (See col. 12, ll. 5-12; Figs. 2(a)-2(b)).

In addition, the claimed process comprises a third step of forming a second crystalline material by heat-treating said first crystalline material by a plurality of times so as to form, on said first crystalline material, a high temperature region and a low temperature region (See, for example, pars. [0068]-[0070]; Figs. 8-9). No such step is disclosed or suggested in '614. Accordingly, '614 does not reasonably suggest the method of the claims as presently amended, and the rejection should be removed.

Conclusion

In view of the foregoing, Applicants submit that pending claims 1-9, 24-28 and 38-43 are now patentable and that the present application is in condition for allowance. Notice thereof is respectfully requested.

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Respectfully submitted,

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